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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/996,211	11/28/2001	Rene Lazecki	P/1336-156	1227

2352 7590 09/24/2003

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EXAMINER

SAADAT, CAMERON

ART UNIT	PAPER NUMBER
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3713

DATE MAILED: 09/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/996,211

Applicant(s)

LAZECKI ET AL.

Examiner

Cameron Saadat

Art Unit

3713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7/9/03.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,8-13 and 17-19 is/are rejected.
- 7) ☒ Claim(s) 2,4-7,14-16 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

In response to amendment filed 7/9/03, claims 1-20 are pending in this application; and the amendments to the specification have been entered.

Claim Objections

1. Claim 20 is objected to because of the following informalities: The claim language, "comprising at least one obstacle to visibility of an entire impact area of a projectile", is somewhat unclear, and it is the examiner's recommendation that the clarity and precision of the claim language can be improved by replacing "to visibility" with --in the line of sight-- .

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1, 3, 8-10, and 17-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Doerfel et al. (USPN 4,682,953; hereinafter Doerfel).**

Regarding claim 1, Doerfel discloses a method for simulating the effect of an exploding projectile fired by a weapon, the method comprising: emitting a weapon signal 28 from a weapon 12 toward a target area 14 via master station 4; detecting the weapon signal by a sensor 30, 32, 34, located near the target area 14; transmitting an impact signal 26 when the weapon signal is sensed by the sensor 30, 32, 34 and causing the impact signal to cover a simulated impact area including a first portion of the impact area which is covered by the weapon signal from the weapon and a second portion of the impact area which is not covered by the weapon signal of the weapon and which is part of the impact area of a simulated detonation of a projectile that would be fired by the weapon to the impact area (See Col. 5, lines 8-25; Figs. 2-3).

Regarding claim 3, Doerfel discloses a device for simulating the effect of exploding projectiles fired by a weapon toward a target area, the device comprising; a sensor 30, 32, 34 located near the

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target area 14 and adapted for sensing a weapon signal 28 from a weapon 12 via master station 4; a transmitter 66 operatively linked to the sensor such that a weapon signal is detected by the sensor and the transmitter emits an impact signal over the impact area of the simulated projectile (See Col. 5, lines 8-25; Figs. 2-3).

Regarding claims 8-9, Doerfel discloses a device, further comprising a reflector for reflecting at least an effective portion of the weapon signal back to a weapon, which emits the weapon signal for calibration (See Fig. 9D; Col 9, lines 14-24).

Regarding claim 10, Doerfel discloses device, further comprising a weapon 12 spaced from the sensor operable to emit a weapon signal toward the sensor 30, 32, 34 via master station 4 (See Figs. 2 and 3).

Regarding claims 17-19, Doerfel discloses a device, wherein the sensor is sensitive to high frequency radio signals (as per claim 17), and the transmitter is adapted to emit an impact signal in the form of a high frequency radio signal (as per claims 18-19), (see Fig. 5, refs 58 and 66).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
6. **Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doerfel et al. (USPN 4,682,953; hereinafter Doerfel).**

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Regarding claims 11-13, Doerfel discloses all of the claimed subject matter with the exception of not explicitly applying a laser communication system between the weapon and sensor. Instead, Doerfel indicates that these laser communication systems are well known yet less desirable than the recommended radio-wave communication system, since lasers can be adversely affected by the environment where training is to occur, such as by foliage that is found in battles conducted in wooded areas. However, it would have been obvious to implement a communication system that is appropriate for the environment where training will occur. For instance a laser light communication system would be just as desirable in an environment where training occurs in a non-wooded environment or more desirable in an environment having high radio-wave interference.

Response to Arguments

7. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

8. Independent Claim 20 is allowable; the following is an examiner's statement of reasons for allowance: Patentability is seen in, although not limited to:

the combination of elements, specifically including: simulating combat action comprising an obstacle in the line of sight of an entire impact area of a projectile; a device located at the periphery of the obstacle for sensing a weapon signal and transmitting an impact signal *over the obstructed impact area* to simulate the effect of a weapon fired projectile exploding at a target location near the device.

9. Claims 2, 4-7, and 14-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

Patentability is seen in, although not limited to:

- Claims 2 and 4 - the combination of elements, specifically including: simulating the effect of exploding projectiles fired by a weapon toward a target area, wherein a sensor is directionally sensitive for sensing the direction from which a weapon signal is received;

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and wherein the sensor comprises a transmitter that *directionally modifies the transmission of an impact signal to simulate an impact area of a detonating projectile, based on the angle of incidence of the sensed weapon signal*. The closest prior art of record does not teach or fairly suggest this feature in the combination.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Wick (USPN 4,273,536) – discloses a laser gun simulator system that incorporates trajectory, range and approach angle information.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cameron Saadat whose telephone number is 703-305-5490. The examiner can normally be reached on M-F 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teresa J Walberg can be reached on 703-308-1327. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.

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Teresa Walberg
Supervisory Patent Examiner
Group 3700